Low Cost Scout UAV Acoustic System (LOSAS)

Scientific Applications and Research Associates, Inc.

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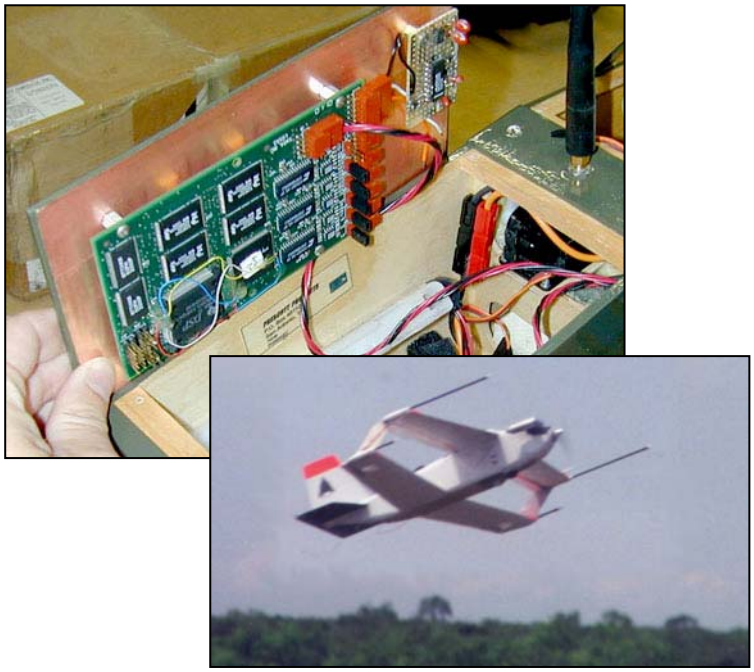
VENDOR DESCRIPTION

The Low Cost Scout UAV Acoustic System (LOSAS) is a passive acoustic sensor system and database manager to provide wide area detection and location of operating mechanized targets. The sensor consists of 4 wing-mounted probes and a single circuit board containing the data acquisition and sensor processor. LOSAS can detect operating targets through smoke, clouds, fog, foliage or camouflage, both day and night. LOSAS can be used to cue imaging sensors (EO/IR) and provide steering input to the UAV autopilot for autonomous operation in radio "shadows." LOSAS can also detect gunfire. Target detection data and estimated coverage area are displayed on a laptop computer connected to the UAV GCU via an RS-232 port.



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Business Category: Small Business

Acoustic

Power Source		Environmental
Sensors	6VDC, 1.2A 6 COTS AA size NiMH batteries (1100 mAh) provide 50 minutes continuous operation.	Environmental certification tests have not yet been conducted on the LOSAS hardware; however, the LOSAS hardware is designed to be compatible with a wide range of UAV operating environments.
Monitor	1 or 2 COTS 14.8V lithium batteries	

Sensor	Description	Detection	Size/Weight	Features
Acoustic	DSP calculates GPS position of targets and can provide steering commands to autopilot for autonomous search. On-board memory stores sensor and detection data.	Tracked Vehicle 0-2+km Wheeled Vehicle 0-1km	75mm x 140mm x 25mm Weight: 0.3 kg	■ Passive omni-directional detection ■ Low false alarm rate ■ Operates on COTS batteries ■ RS-232 interface with UAV autopilot ■ 32MW flash memory

Device	Description	Message Type	Size/Weight	Features
Monitor	Laptop computer connected to GCU via RS-232 port displays target detections in real-time on search area map. Utilizes existing UAV datalink.	RS-232 9 bit: 1 start bit No stop No Parity	32cm x 26cm x 5cm Weight: 3 kg	■ Real-time detection data plotted on map display ■ Playback of mission data files ■ Run system simulations